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FIG. 1.

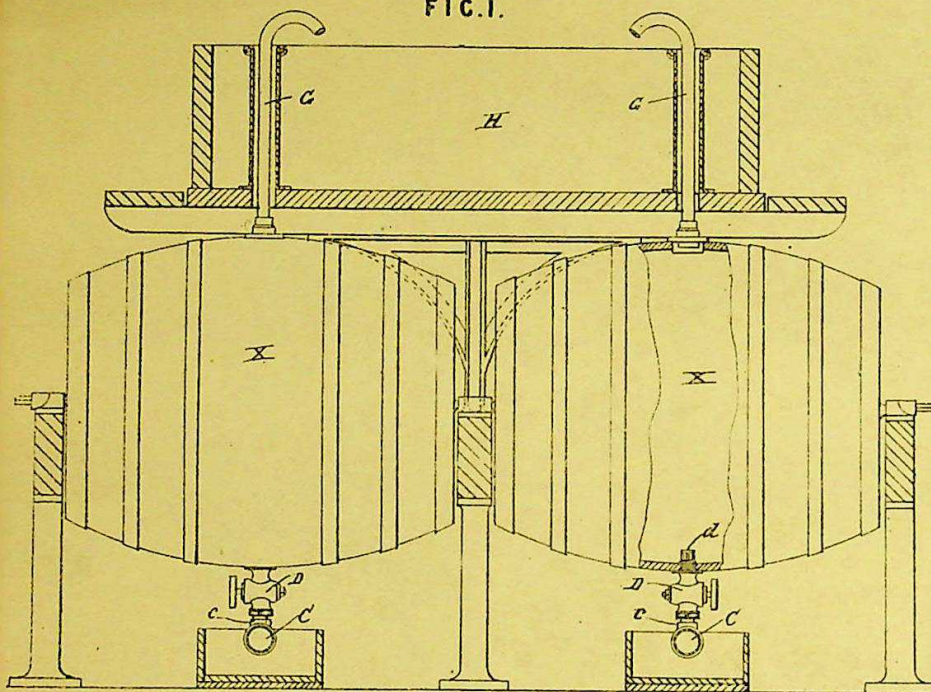


FIG. 2.

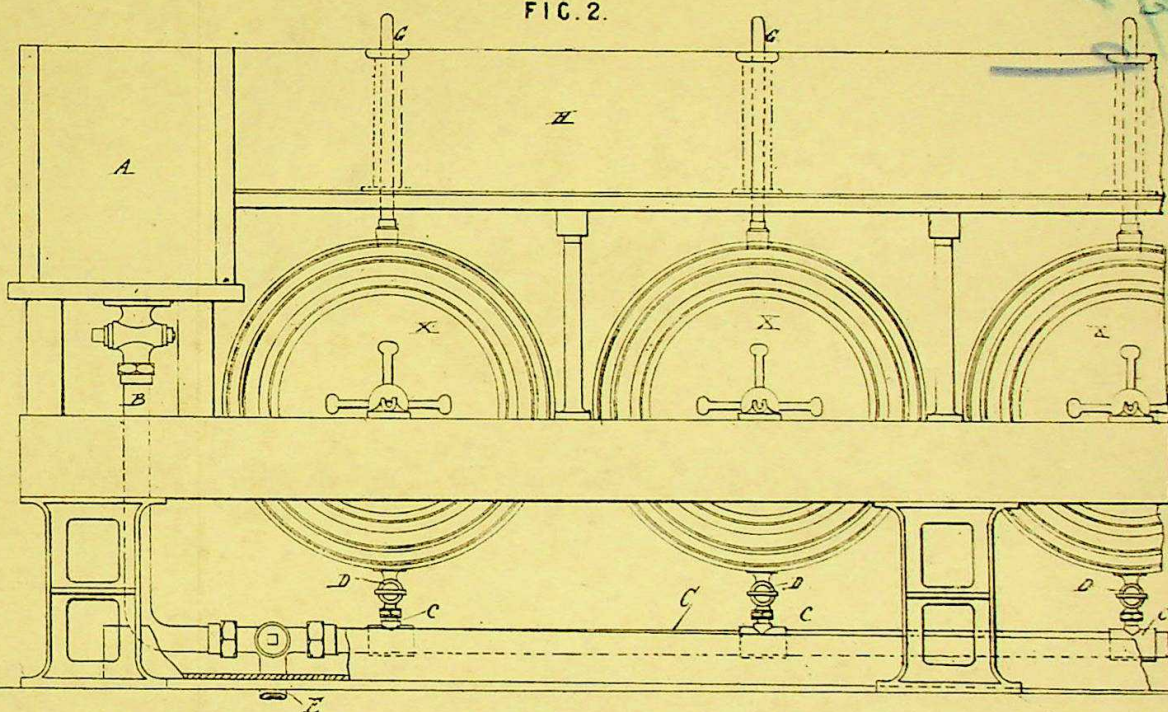
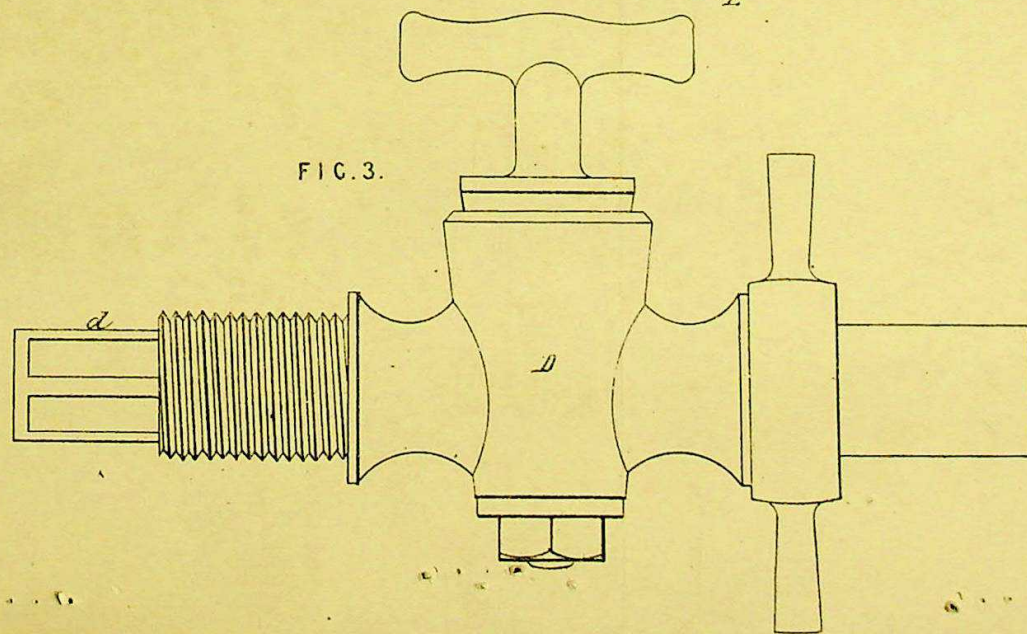


FIG. 3.



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A.D. 1885.—N° 14,425.

Complete  
Specification.*Hodson's Improvements in and Apparatus for Tunning or Cleansing Beer.*

## COMPLETE SPECIFICATION.

**Improvements in and Apparatus for Tunning or Cleansing Beer.**

I JOHN HODSON, of Clarence Street Brewery, Burton-on-Trent, Brewer do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The object of my Invention is to prevent yeast getting into the racking back and 5 the barrels in which the beer is sold, as it is liable to do under the systems hitherto in use, producing turbidity and ultimate unsoundness.

The present most usual method on what is known as the "Burton Union Swan neck System" is to charge each Union cask (the casks in which the separation of 10 the yeast from the beer is effected) by means of a pipe situated at the side of the cask and within a few inches of the top of the cask but there is no action to prevent a considerable amount of yeast depositing at the bottom of the said cask and this is very liable to happen to the injury of the beer—With the object of preventing thickening or "yeast biting" of the beer with the tendency to unsoundness from 15 this cause, a screw tail cock has been used it being inserted at the bottom of each cask projecting therein about four inches with the view of keeping back deposit of yeast, and when the Beer on being transferred to the Racking Back is drawn off to this point the screw tail cock is cautiously lowered in order to run off all the bright beer, but this is often attended with bad results as it requires attention which cannot always be relied upon—This screw tail cock has not been used for 20 charging the Union casks but only for drawing off the beer therefrom.

According to my Invention I dispense altogether with the present method of charging and filling up from the side of the Union Cask close to the top and I use a cock (preferably a screw tail cock) projecting but slightly (say an inch) from the interior of the bottom of the Union Casks, and I attach or connect each such cock 25 to a pipe running the length of the sets of casks. This pipe answers both for charging each Union Cask during the working and cleansing the Beer of its yeast, and for conveying the Beer when bright to the racking back. This can be conveniently effected by means of a three way cock which opens communication either between the charging main and the Union Casks or between the latter and 30 the drawing off pipe.

I use a distributing surface or hood or cap over or above the opening of the said cocks into the Union Casks so that the beer as it enters the said casks is directed 35 downwards thereby producing agitation or stirring up and preventing yeast dropping down and remaining as a deposit, but causing it to rise and escape from the swan necks into the yeast back.

I may use a pump for forcing the beer in at the bottom of the Union Casks for filling up and thus prevent the deposit of yeast. I may use a receiver from the feeder with a ball cock, as a self acting means of always keeping the unions 40 filled up.

In order that my invention may be thoroughly understood I will explain the accompanying drawing which illustrates a part of a range of Union Casks and their adjuncts arranged according to my invention.



*Hodson's Improvements in and Apparatus for Tunning or Cleansing Beer.*

Figures 1 and 2 are views at right angles to each other part of one of the casks in Figure 1 being shewn in section. Figure 3 shews one of the screw tail cocks separately. A is the feed trough into which the beer to be treated is received. From this the charging main B leads; it being continued in a pipe or pipes C running underneath the row or rows of Union Casks X as shewn in Figure 2 (in Figure 1 two pipes C are shewn one for each row of union casks). Communication from the charging main is made with each union cask by T pieces c and Union cocks D. E is the outlet pipe for running off the beer from the casks X. A three way cock is situated at F so that the pipe or pipes C can be put in communication with the charging main B for charging the Union casks or with the pipe E for running off their contents. Each screw tail cock D projects but a slight distance above the bottom of the cask and is shewn as being provided over its outlet part with a cover hood or deflecting cap or surface d which directs the incoming beer downwards and prevents deposit of yeast at the bottom of the cask and causes the yeast to escape by the "swan necks" G into the yeast back H. These swan necks are or may be of the kind usually employed.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:—

1. The improved method or means for preventing deposit of yeast in the union casks substantially as hereinbefore described.

2. In apparatus on the system of what is known as the "Burton Union Swan Neck System" a pipe or pipes C and cocks D arranged in connection with the charging main and the outlet so that the same cocks are used for charging and for drawing off, both from the bottom of the Union Casks substantially as hereinbefore described.

3. In and for apparatus of the kind hereinbefore described and claimed a cock with a deflecting surface cap or hood so arranged as to prevent deposit of yeast in the union casks substantially as hereinbefore described.

Dated this 21st day of April 1886.

JOHN HODSON.

LONDON: Printed by EYRE AND SPOTTISWOODE,  
Printers to the Queen's most Excellent Majesty.  
For Her Majesty's Stationery Office.

1886.